

AMENDED CLAIMS UNDER ARTICLE 19

1. (Amended) A communication apparatus comprising:

a first modulation section that modulates first transmit data and obtains a first modulated signal;

5 a second modulation section that modulates second transmit data and obtains a second modulated signal; and

a plurality of antennas that transmit said first and second modulated signals;

wherein said first modulation section has:

10 a first mapping section that maps said first transmit data at a signal point position of a predetermined modulation method; and a phase rotation section that changes a mode of signal point arrangement by changing a phase of a mapped signal point in a time direction or
15 in a frequency direction; and

said second modulation section has a second mapping section that maps said second transmit data at a signal point position of a predetermined modulation method.

20 2. (Amended) A communication apparatus that performs OFDM-MIMO communication, said communication apparatus comprising:

a first modulation section that modulates first transmit data and obtains a first modulated signal;

25 a second modulation section that modulates second transmit data and obtains a second modulated signal; and

a plurality of antennas that transmit said first

and second modulated signals;

wherein said first modulation section forms a plurality of said first modulated signals with mutually different signal point arrangements from identical data
5 by modulating identical data of said first transmit data a plurality of times, changing a mode of signal point arrangement; and

said second modulation section forms said second modulated signal by modulating said second transmit data
10 without changing a mode of signal point arrangement.

3. The communication apparatus according to claim 2, wherein said first modulation section forms modulated signals with an identical modulation method and having
15 a mutual phase difference from identical data as said first modulated signal.

4. The communication apparatus according to claim 3, wherein said first modulation section forms QPSK
20 modulated signals having a mutual 45° phase difference from identical data as said first modulated signal.

5. The communication apparatus according to claim 3 or claim 4, wherein said first modulation section comprises:
25 a mapping section that maps said first transmit data at a signal point position of a predetermined modulation method; and a phase rotation section that rotates a phase

of a mapped signal point through an angle in accordance with a number of times of transmission of said identical data.

5 6. (Amended) The communication apparatus according to claim 1, further comprising an interleaver that interleaves said first and/or said second transmit data; wherein said first modulation section modulates data after interleaving, changing a mode of signal point
10 arrangement.

7. (Amended) The communication apparatus according to claim 1, further comprising a receiving section that receives feedback information indicating a reception
15 state of said first and/or said second modulated signal from a communicating party; wherein said first modulation section changes a mode of signal point arrangement based on said feedback information.

20 8. (Amended) A communication method being a MIMO communication method that transmits a first modulated signal in which first transmit data is modulated from a first antenna, and transmits a second modulated signal in which second transmit data is modulated from a second
25 antenna, said communication method comprising:

a step of forming said first modulated signal, changing a mode of signal point arrangement, by mapping

said first transmit data at a signal point position of a predetermined modulation method, and changing a phase of a mapped signal point in a time direction or in a frequency direction; and

5 a step of forming said second modulated signal by mapping said second transmit data at a signal point position of a predetermined modulation method.

9. (Added) The communication apparatus according to
10 claim 1, further comprising an orthogonal frequency division multiplexing section that performs orthogonal frequency division multiplexing of signals output from said first and said second modulation sections.

15 10. (Added) The communication apparatus according to claim 9, further comprising an interleaver that interleaves said first and/or said second transmit data; wherein said first modulation section modulates data after interleaving, changing a mode of signal point
20 arrangement.

11. (Added) The communication apparatus according to claim 9, further comprising a receiving section that receives feedback information indicating a reception
25 state of said first and/or said second modulated signal from a communicating party; wherein said first modulation section changes a mode of signal point arrangement based

on said feedback information.

12. (Added) The communication method according to claim
8, further comprising a step of performing orthogonal
5 frequency division multiplexing of said first and said
second modulation signals.

13. (Added) A communication method that is an OFDM-MIMO
communication method comprising: a first modulated signal
10 forming step of forming a plurality of modulated signals
with mutually different signal point arrangements from
identical data by modulating identical data of first
transmit data a plurality of times, changing a mode of
signal point arrangement; and a second modulated signal
15 forming step of modulating second transmit data without
changing a mode of signal point arrangement.

14. (Added) The communication method according to claim
13, wherein, in said first modulated signal forming step,
20 a plurality of modulated signals with an identical
modulation method and having a mutual phase difference
are formed from identical data.

15. (Added) The communication method according to claim
25 14, wherein, in said first modulated signal forming step,
QPSK modulated signals having a mutual 45° phase
difference are formed from identical data.

16. (Added) The communication method according to claim
13, wherein said first modulated signal forming step
comprises: a step of mapping said first transmit data
5 at a signal point position of a predetermined modulation
method; and a step of rotating a phase of a mapped signal
point through an angle in accordance with a number of
times of transmission of said identical data.